AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1. (Currently amended) A method for filtering a received signal in a wireless receiver, comprising:

providing a received signal to a multiple-stage baseband filter chain located between a downconverter and a demodulator, the multiple-stage baseband filter chain comprising an input, variable gain amplifiers and an output; ~~and~~

inverting the impedance of the received baseband signal in a first stage of a multiple-stage baseband filter chain using an inductance applied at an output of a first stage variable gain amplifier, the baseband filter chain arranged such that a feedback path is located between an output of a <u>first</u> transconductance amplifier and an input of the <u>first</u> transconductance amplifier<u>, the feedback path including a second transconductance amplifier; and</u>

<u>applying a bi-quad filter</u>.

2. (Previously presented) The method of claim 1, wherein inverting the impedance of the received signal at the output of the first stage variable gain amplifier comprises using a voltage controlled current source to transform the inductance applied to the received signal to a capacitance.

3. (Original) The method of claim 2, further comprising implementing the voltage controlled current source as a pair of transconductance amplifiers.

4. (Previously presented) The method of claim 3, further comprising inserting a capacitance at the output of the filter chain.

5. (Previously presented) A low-noise baseband filter for a wireless receiver, comprising:

a multiple-stage filter chain, a first stage of the multiple-stage filter chain comprising:

an amplifier;

an impedance inverter applied at the output of the amplifier and configured to transform inductance applied to a received baseband signal to a capacitance, the impedance inverter arranged such that a feedback path is located between an output of a first transconductance amplifier and an input of the first transconductance amplifier, the feedback path including a second transconductance amplifier; and

a bi-quad filter coupled to the output of the impedance inverter.

6. (Canceled)

7. (Previously presented) The low-noise baseband filter of claim 5, wherein the impedance inverter further comprises:

at least one capacitance coupled to the output of one of the first and second transconductance amplifiers.

8. (Original) The low-noise filter of claim 7, wherein the impedance inverter removes direct current (DC) offset present at the input of the amplifier.

9. (Previously presented) A portable transceiver, comprising:

a modulator configured to receive and modulate a data signal;

an upconverter configured to receive the modulated data signal and provide a radio frequency (RF) signal;

a transmitter configured to transmit the RF signal; and

a direct conversion receiver having a baseband filter chain including an amplifier, a bi-quad filter and an impedance inverter configured to transform inductance applied to a received signal to a capacitance, the impedance inverter having a feedback path located between an output of a first transconductance amplifier and an input of the first transconductance amplifier, the feedback path including a second transconductance amplifier.

10. (Canceled)

11. (Currently amended) The portable transceiver of claim 9, wherein the impedance inverter further comprises:

at least one capacitance coupled to the output of ~~one of~~ the first transconductance amplifier.

12. (Original) The portable transceiver of claim 11, wherein the impedance inverter removes direct current (DC) offset present at the input of the amplifier.

13.-14. (Canceled)

15. (Previously presented) A system for removing direct current (DC) offset from a received signal, comprising:

a variable gain amplifier configured to amplify a downconverted representation of a received radio frequency (RF) signal to generate an amplified baseband signal; and

a gyrator-generated inductance applied at the output of the variable gain amplifier in a first stage of a multiple-stage baseband filter chain, the gyrator-generated inductance configured to transform inductance present at the output of the variable gain amplifier to a capacitance, the gyrator-generated inductance and the variable gain amplifier arranged such that the amplified baseband signal is not applied at an input of the variable gain amplifier, the gyrator-generated inductance implemented via a first transconductance amplifier having differential inputs and a second transconductance amplifier having a single input.

16. (Previously presented) The system of claim 15, wherein the gyrator-generated inductance adds a high pass filter pole that is not a function of the transconductance of the variable gain amplifier.

17. (Original) The system of claim 15, wherein the gyrator-generated inductance shunts excess DC current present at the output of the variable gain amplifier to ground.

18. (Original) The system of claim15, wherein, at a frequency above a high-pass cutoff frequency, the gyrator-generated inductance appears as a high impedance at the output of the variable gain amplifier.